

REMARKS

Claims 22-27 and 46 are pending in the application. The Office Action indicates that claims 22-27 are allowable and that claim 46 is rejected. Reconsideration in view of the above amendments and following remarks is respectfully requested.

Specification

The foregoing changes to the specification are provided to correct typographical errors only. No new matter has been added.

Claim Rejections

Claim 46 is rejected under 35 U.S.C. 102(e) as being anticipated by patent publications US 2002/0005803 A1 and US 2002/0053982 to Kevin W. Baugh *et al.* (the “Baugh publications”). The rejection is respectfully traversed.

35 U.S.C. 102(e) provides, in relevant part, that a person shall be entitled to a patent unless “the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent...” (emphasis added). Both the present application and the Baugh publications were, at the time the invention of the present application was made, subject to an obligation of assignment to Lockheed Martin Mission Systems. Messrs. Baugh, Lodgwig, Benner, and Budic invented the subject matter of their respective applications as part of their employment duties while employed by Lockheed Martin Mission Systems, which required assignment of all inventions created by employees within the scope of their employment. Thus, the Baugh publications are not *by another* and thus do not qualify as 35 U.S.C. 102(e) references against the claims of the present application. Therefore, withdrawal of the rejection of claim 46 under 35 U.S.C. 102(e) is respectfully requested.

Claim 46 is also rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,793,798 to Rudish *et al.* (“Rudish”). Rudish describes a virtual beam system, including a transmitting subsystem and a receiving subsystem, designed to minimize the probability that data transmitted over a communications system will be intercepted by an unintended recipient. The transmitting subsystem is composed of a first dividing means, a transmitting antenna array, and

Application No. 09/994,921
Amendment dated January 22, 2004
Reply to Office Action dated October 23, 2003

an element position encoding means. The receiving subsystem is composed of a receiving antenna, an element position decoding means, a second dividing means, and a combining means. Element position encoding means comprises specifically a unique marking means and a pseudo-random phase shifting means.

In contrast, claim 46 of the present invention recites, “An adaptive broadcast radar system, comprising: a transmitter comprising a first plurality of sub-apertures, wherein each sub-aperture comprises a bank of phase shifters and sub-aperture weights to generate a fixed beam and codes a signal waveform with data about the transmitter, said data including degrees of freedom; and a receiver comprising a second plurality of sub-apertures coupled to a signal processor, wherein each sub-aperture comprises a bank of phase shifters and sub-aperture weights to modify the signal waveform received from the transmitter and wherein said signal processor generates a transmit beam signal according to said data within each signal waveform” (emphasis added).

Specifically, claim 46 of the present invention recites “sub-aperture weights” in each sub-aperture of the transmitter to provide a fixed beam in, for example, a direction relative to the boresight of the transmitter. Claim 46 further recites “sub-aperture weights” in each sub-aperture of the receiver to modify the received signal waveform. Rudish does not disclose the use of sub-aperture weights in either the transmitter or receiver. Finally, the transmitter recited in claim 46 codes a signal waveform with data that includes the degrees of freedom of the transmitter. The encoding means discussed in Rudish relate to either pseudo-random phase shifting or unique marking that represents “the respective position which the particular transmitting element of the transmitting antenna array ... occupies in the antenna array.” (See Rudish, Col. 11, lines 50-61.) Thus, Rudish does not disclose coding a signal waveform with data including the degrees of freedom of the transmitter as recited in claim 46 of the present application.

Thus, Rudish fails to disclose the features of claim 46. Therefore, Applicant respectfully submits that claim 46 is distinguishable over Rudish for at least the reasons cited above. Therefore, withdrawal of the rejection of claims 46 under 35 U.S.C. 102(b) is respectfully requested.

Application No. 09/994,921
Amendment dated January 22, 2004
Reply to Office Action dated October 23, 2003

CONCLUSION

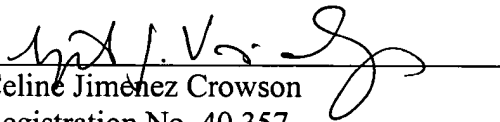
In view of the foregoing, Applicants submit that this application is in condition for allowance, and such disposition is earnestly solicited. If the Examiner believes that the prosecution of this case might be advanced by discussing the application with Applicant's representative, in person, or over the telephone, we would welcome the opportunity to do so.

EXCEPT for fees payable under 37 CFR §1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application, including fees due under 37 CFR §1.16 and 1.17 which may be required, including any required extension of time fees, or credit, any overpayment to deposit account No. 50-1349. This paragraph is intended to be a constructive petition for extension of time in accordance with 37 CFR §1.136(a)(3).

Respectfully submitted,

Dated: January 22, 2004

HOGAN & HARTSON L.L.P.
Columbia Square
555 Thirteenth Street, N.W.
Washington, D.C. 20004-1109
Telephone: (202) 637-5600
Facsimile: (202) 637-5910

By: 
Celine Jimenez Crowson
Registration No. 40,357

Ajit J. Vaidya
Registration No. 43,214

Thomas W. Edman
Registration No. 51,643